



## Aim

The aim of this project is to develop data and maps to describe existing sites of coastal works (replenishment, defence, creation), and future sites of requirement, to highlight the opportunity for beneficial use of dredge materials in the South marine plan areas.

The evidence will assist with developing supporting text, a map, or a policy for the South marine plans that promotes holistic, integrated and sustainable management of the marine area.

## Introduction and methodology

MMO was established to make a significant contribution to sustainable development in the marine area as set out in the government's High Level Marine Objectives and Marine Policy Statement.

Marine planning aims to support activities and improve integrated management to achieve sustainable development in the marine area. One aspect of integrated management is the use of dredged materials from capital or maintenance dredging for coastal defence, beach replenishment or habitat creation. This ensures the materials are 'recycled' and retained in the marine environment, reducing the need for man-made materials or transportation of materials.

The use of dredged materials for these activities already occurs on the South Coast of England, for example at Lymington Harbour. However, stakeholders have expressed that a strategic overview of the location of dredging activities and resource requirements would better consolidate the two and improve resource use.

There is related work being carried out on this topic including initiatives to improve coordination of the management of dredged materials for beneficial use such as the Strategic Coastal Programme between the

Environment Agency and local authorities. Further related work includes projects, research, conferences and workshops.

The information produced by this project is intended to contribute to the wider aspiration to use dredge materials beneficially. The project results will be used by MMO to decide on the type of support and approach (i.e. plan policy, spatial differentiation) needed in the South marine plans to further promote the beneficial use of dredged material.

The methodology was to use existing data from the MMO licensing system, published literature on beneficial uses and responses from a project stakeholder questionnaire. This information was tabulated and mapped using Geographic Information Systems (GIS).

This project looked at 90% of the dredging campaigns in the South marine plan areas. The remaining 10% are dredging activities related to small operations.

A steering group made up of representatives from Environment Agency, Crown Estate and Natural England was used to advise on and review the work.

## Results

Maps of dredging activity since 2011 and sites of beneficial use of dredge materials have been produced. Tables detailing the applicant, organisation, location, volumes and material type reveal where and what has been dredged in the South marine plan areas.

Up to 2 million tonnes of dredge material could be produced annually from maintenance dredging. The majority of this material is likely to be silts and clay but some sand and gravel could also be produced.

A further 31 tonnes approximately could be produced from capital dredging campaigns that may take place over the next ten years. It is



estimated that the split between fine sediment and sand/gravel could be roughly 40/60.

To date approximately 15 beneficial use projects have taken place in the South marine plan areas. Three of these are planned to continue on a rolling basis, some others may continue on an irregular basis while others are one off.

It is estimated from current knowledge that a further nine projects could occur in the next 10 years. Planned dredging campaigns for the future will produce silt, clay, sand and chalk in various volumes. Exploration of potential future activity revealed that material is planned for re-use as nourishment and land claim or land raising.

Areas such as Bournemouth, Poole, the Solent and Christchurch bay were identified as sites that could use dredge materials beneficially in the future.

## Conclusions and recommendations

The challenges and issues related to strategically coordinating this type of work are discussed and recommendations for improving beneficial use using the marine planning system are given in the report.

The project outlined that there is scope for beneficial use of some dredged materials provided they are suitably matched and the re-use logistics can be agreed. There are significant logistical and technical issues and limitations related to implementing beneficial use of dredged materials. These relate to cost/funding, sediment treatment and contamination, sediment composition and compatibility, transport logistics, timing and obtaining consents and licences.

There is potential for marine planning to assist with improving the beneficial use of dredge materials by providing clear statements of need

and value, highlighting the multiple beneficiaries and promoting flagship projects.

Recommendations from this project include:

- The creation of a public tool that allows information on dredged material need and availability to be exchanged.
- Incorporating beneficial use in existing guidance.
- Providing advice on funding beneficial use projects.

## MMO comments

MMO is grateful to those stakeholders that have contributed to the project via the questionnaire on dredging and beneficial use.

This project has provided maps of dredging activity in the South marine plan areas and explored the future opportunity for beneficial use of dredge materials. Further work to include all types of dredging activity in a repeat of this analysis for marine planning purposes is required. This will be carried out prior to this evidence being used to inform the writing of marine plan policy in the South marine plan areas.

This evidence will be useful for MMO in developing marine plans and managing the marine environment but also to others with an interest or stake in the sustainable use of marine resources.

The MMO intends to continue to work collaboratively across its functions, with other agencies and with its stakeholders to improve sustainable use and management of dredged materials where relevant.

## Further information

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